

WHAT IS CLAIMED IS:

1. A method comprising:
  - providing a substrate;
  - providing a coverlay blank;
  - 5 laminating the coverlay blank to the substrate; and
  - forming at least one opening in the coverlay blank by photolithography.
2. The method of claim 1, wherein the photolithography is performed after the laminating.
3. The method of claim 1, wherein the coverlay blank is of a flexible material.
- 10 4. The method of claim 3, wherein the substrate is of a flexible material.
5. The method of claim 1, wherein the coverlay blank includes at least one of acrylic, urethane and polyimide.
6. The method of claim 1, wherein:
  - the substrate has metal traces on a first surface of the substrate and a metal ground
  - 15 plane on a second surface of the substrate that is opposite to the first surface; and
  - the laminating includes laminating the coverlay blank to the first surface of the substrate.

7. The method of claim 6, wherein the metal traces and metal ground plane are of copper.
8. A product formed by the method of claim 1.
9. An article of manufacture, comprising:
- 5           a substrate; and
- a coverlay laminated to the substrate and having at least one opening formed in the coverlay by photolithography.
10. The article of manufacture of claim 9, wherein the coverlay is of a flexible material.
11. The article of manufacture of claim 10, wherein the substrate is of a flexible material.
- 10   12. The article of manufacture of claim 9, wherein the coverlay includes at least one of acrylic, urethane and polyimide.
13. The article of manufacture of claim 9, wherein:
- the substrate has metal traces on a first surface of the substrate and a metal ground plane on a second surface of the substrate that is opposite to the first surface; and
- 15           the coverlay is laminated to the first surface of the substrate.
14. The article of manufacture of claim 13, wherein the metal traces and metal ground plane are of copper.

15. An article of manufacture, comprising:

at least two integrated circuit (IC) packages in stacked relation to each other, each of the IC packages including:

a substrate;

5 an IC mounted on a surface of the substrate; and

a coverlay laminated on the surface of the substrate and having at least one opening formed by photolithography; and

at least one conductive connection formed through one of the coverlays and connecting one of the ICs to another of the ICs.

10 16. The article of manufacture of claim 15, wherein each IC is positioned in an opening of a respective one of the coverlays, the opening formed by photolithography.

17. The article of manufacture of claim 15, wherein the coverlays are of a flexible material.

15 18. The article of manufacture of claim 17, wherein the substrates are of a flexible material.

19. An apparatus comprising:

a stacked integrated circuit (IC) package which includes:

a first substrate;

a first IC mounted on a surface of the first substrate;

a first coverlay laminated on the surface of the first substrate and having at least one opening formed by photolithography;

a second substrate positioned in stacked fashion on the first coverlay;

a second IC mounted on a surface of the second substrate;

5 a second coverlay laminated on the surface of the second substrate and having at least one opening formed by photolithography; and

at least one conductive connection connecting the first IC to the second IC and passing through at least one opening in the first coverlay; and

a communication device coupled to at least one of the first IC and the second IC.

10 20. The apparatus of claim 19, wherein:

the first IC is positioned in an opening formed by photolithography in the first coverlay; and

the second IC is positioned in an opening formed by photolithography in the second coverlay.

15 21. The apparatus of claim 19, wherein the first and second coverlays are of a flexible material.

22. The apparatus of claim 21, wherein the first and second substrates are of a flexible material.

23. A method comprising:

20 providing a substrate;

providing a coverlay blank of a flexible material;  
forming at least one opening in the coverlay blank by punching the coverlay blank; and  
laminating the punched coverlay blank to the substrate.

5    24. The method of claim 23, wherein the substrate is of a flexible material.

25. The method of claim 23, wherein the coverlay blank includes at least one of acrylic, urethane and polyimide.

26. The method of claim 23, wherein:

10        the substrate has metal traces on a first surface of the substrate and a metal ground plane on a second surface of the substrate that is opposite to the first surface; and

      the laminating includes laminating the punched coverlay blank to the first surface of the substrate.

27. The method of claim 26, wherein the metal traces and metal ground plane are of copper.

15    28. A product formed by the method of claim 23.

29. An article of manufacture, comprising:

      a substrate; and

a coverlay of a flexible material, laminated to the substrate, and having at least one opening formed in the coverlay.

30. The article of manufacture of claim 29, wherein the substrate is of a flexible material.

31. The article of manufacture of claim 29, wherein the coverlay includes at least one of  
5 acrylic, urethane and polyimide.

32. The article of manufacture of claim 29, wherein:

the substrate has metal traces on a first surface of the substrate and a metal ground plane on a second surface of the substrate that is opposite to the first surface; and

the coverlay is laminated to the first surface of the substrate.

10 33. The article of manufacture of claim 32, wherein the metal traces and metal ground plane are of copper.

34. An article of manufacture, comprising:

at least two integrated circuit (IC) packages in stacked relation to each other, each of the IC packages including:

15 a substrate;

an IC mounted on a surface of the substrate; and

a coverlay of a flexible material laminated on the surface of the substrate and having at least one opening formed in the coverlay; and

at least one conductive connection formed through one of the coverlays and connecting one of the ICs to another of the ICs.

35. The article of manufacture of claim 34, wherein each IC is positioned in an opening of a respective one of the coverlays.

5 36. The article of manufacture of claim 34, wherein the substrates are of a flexible material.

37. An apparatus comprising:

a stacked integrated circuit (IC) package which includes:

a first substrate;

10 a first IC mounted on a surface of the first substrate;

a first coverlay of a flexible material laminated on the surface of the first substrate and having at least one opening formed in the first coverlay;

a second substrate positioned in stacked fashion on the first coverlay;

a second IC mounted on a surface of the second substrate;

15 a second coverlay of a flexible material laminated on the surface of the second substrate and having at least one opening formed in the second coverlay; and

at least one conductive connection connecting the first IC to the second IC and passing through at least one opening in the first coverlay; and

a communication device coupled to at least one of the first IC and the second IC.

20 38. The apparatus of claim 37, wherein:

the first IC is positioned in an opening in the first coverlay; and  
the second IC is positioned in an opening in the second coverlay.

39. The apparatus of claim 37, wherein the first and second substrates are of a flexible material.